

APPLN. FILING DATE: JULY 9, 2001

TITLE: HUMAN BASIC FIBROBLAST GROWTH FACTOR ANALOG

INVENTOR(S): JOHN C. FIDDLES, ET AL.

APPLICATION SERIAL NO: 09/902,460

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FIG. 1-I

Human Basic Fibroblast Growth Factor

10	20	30	40	50	60	70
AATTCATGCC	TCTTTCTCTC	CTTTTGTGTTGG	TAGACGACTT	CAGCCTCTGT	CCTTTAATTT	TAAAGTTTAT
80	90	100	110	120	130	140
GCCCCACTTG	TACCCCTCGT	CTTTTGGTGA	TTTAGAGATT	TTCAAAGCCT	GCTCTGACAC	AGACTCTTCC
150	160	170	180	190	200	210
TTGGATTGCA	ACTTCTCTAC	TTTGGGGTGG	AAACGGCTTC	TCCGTTTTGA	AACGCTAGCG	GGGAAAAAAT
220	230	240	250	260	270	280
GGGGGAGAAA	GTTGAGTTTA	AACTTTTAAA	AGTTGAGTCA	CGGCTGGTTG	CGCACGAAAA	GGCCCGCAGT
290	300	310	320	330	340	350
GTGGAGAAAG	CCTAAACGTG	GTTTGGGTGG	TGCGGGGGTT	GGGCGGGGCT	GACTTTTGGG	GGATAAGGGG
360	370	380	390	400	410	420
CGGTGGAGCC	CAGGGAATGC	CAAAGCCCTC	CCGCGGCCCTC	CGACGCGCGC	CCCCCGCCCC	TCGCCTCTCC
430	440	450	460	470	480	490
CCCGCCCCCG	ACTGAGGCCG	GGCTCCCCGC	CGGACTGATG	TCGCGCGCTT	GCGTGTTGTG	GCCGAAGCCG
500	510	520	530	540	550	560
CCGAAGTCAG	AGGCCGGCCC	CAGAAAACCC	GAGCGAGTAG	GGGGCGGGCC	GCAGGAGGGA	GGAGAACTGG
570	580	590	600	610	620	630
GGGCGCGGGA	GGCTGGTGGG	TGTGGGGGGT	GGAGATGTAG	AAGATGTGAC	GCCGCGGGCC	GGCGGGTGCC
640	650	660	670	680	690	700
AGATTAGCGG	ACGGCTGCCC	GCGGTTGCAA	CGGGATCCCC	GGCGCTGCAG	CTTGGGAGGC	GGCTCTCCCC
710	720	730	740	750	760	770
AGGCGGCGTC	CGCGGAGACA	CCCATCTGTG	AACCCCAGGT	CCCGGGCCGC	CGGCTCGCCG	CGCACCAGGG
780	790	800	810	820	830	840
GCCGGCGGAC	AGAAGAGCGG	CCGAGCGGCT	CGAGGCTGGG	GGACCGCGGG	CGCGGCCGCG	CGCTGCCGGG
850	860	870	880	890	900	910
CGGGAGGCTG	GGGGGCCGGG	GGCGGGGCGG	TGCCCCGAGC	GGGTCCGAGG	CCGGGGCCCG	GGCCGGGGGA
920	930	940	950	960		
CGGCGGCTCC	CCGCGCGGCT	CCAGCGGCTC	GGGGATCCCC	GCCGGGCCCC	GCAGGGACC	ATG GCA GCC
						Met Ala Ala
984		999		1014		1029
GGG AGC ATC ACC ACG CTG CCC GCC TTG CCC GAG GAT GGC GGC AGC GGC GCC TTC CCG						
Gly Ser Ile Thr Thr Leu Pro Ala Leu Pro Glu Asp Gly Gly Ser Gly Ala Phe Pro						
1044		1059		1074		1089
CCC GGC CAC TTC AAG GAC CCC AAG CGG CTG TAC TGC AAA AAC GGG GGC TTC TTC CTG						
Pro Gly His Phe Lys Asp Pro Lys Arg Leu Tyr Cys Lys Asn Gly Gly Phe Phe Leu						

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FIG. 1-2

1104 1119 1134 1149
CGC ATC CAC CCC GAC GGC CGA GTT GAC GGG GTC CGG GAG AAG AGC GAC CCT CAC ATC
Arg Ile His Pro Asp Gly Arg Val Asp Gly Val Arg Glu Lys Ser Asp Pro His Ile

1164 1179 1194
AAG CTA CAA CTT CAA GCA GAA GAG AGA GGA GTT GTG TCT ATC AAA GGA GTG TGT GCT
Lys Leu Gln Leu Gln Ala Glu Glu Arg Gly Val Val Ser Ile Lys Gly Val Cys Ala

1224 1239 1254
AAC CGT TAC CTG GCT ATG AAG GAA GAT GGA AGA TTA CTG GCT TCT AAA TGT GTT ACG
Asn Arg Tyr Leu Ala Met Lys Glu Asp Gly Arg Leu Leu Ala Ser Lys Cys Val Thr

1269 1284 1299 1314
GAT GAG TGT TTC TTT TTT GAA CGA TTG GAA TCT AAT AAC TAC AAT ACT TAC CGG TCA
Asp Glu Cys Phe Phe Phe Glu Arg Leu Glu Ser Asn Asn Tyr Asn Thr Tyr Arg Ser

1329 1344 1359 1374
AGG AAA TAC ACC AGT TGG TAT GTG GCA TTG AAA CGA ACT GGG CAG TAT AAA CTT GGA
Arg Lys Tyr Thr Ser Trp Tyr Val Ala Leu Lys Arg Thr Gly Gln Tyr Lys Leu Gly

1389 1404 1419 1434
TCC AAA ACA GGA CCT GGC CAG AAA GCT ATA CTT TTT CTT CCA ATG TCT GCT AAG AGC
Ser Lys Thr Gly Pro Gly Gln Lys Ala Ile Leu Phe Leu Pro Met Ser Ala Lys Ser

1450 1460 1470 1480 1490 1500
TGA TTT TAATGGCCAC ATCTAATCTC ATTTACATG AAAGAAGAAG TATATTTTAG AAATTTGTTA

1510 1520 1530 1540 1550 1560 1570
ATGAGAGTAA AAGAAAATAA ATGTGTATAG CTCAGTTTGG ATAATTGGTC AAACAATTTT TTATCCAGTA

1580 1590 1600 1610 1620 1630 1640
GTAAATATG TAACCATGCC CAGTAAAGAA AAATAACAAA AGTTGTAAAA TGTATATTCT CCCTTTTATA

1650 1660 1670 1680 1690 1700 1710
TTGCATCTGC TGTTACCCAG TGAAGCTTAC CTAGAGCAAT GATCTTTTTC ACGCATTTGC TTTATTGAA

1720 1730 1740 1750 1760 1770 1780
AAGAGGCTTT TAAAATGTGC ATGTTTAGAA AACAAAATTT CTTCATGGAA ATCATATACA TTAGAAAATC

1790 1800 1810 1820 1830 1840 1850
ACAGTCAGAT GTTTAATCAA TCCAAAAATG TCCACTATTT CTTATGTCAI TCGTTAGTCT ACATGTTTCT

1860 1870 1880 1890 1900 1910 1920
AAACATATAA ATGTGAATTT AATCAATTCC TTTCATAGTT TTATAATTCT CTGGCAGTTC CTTATGATAG

1930 1940 1950 1960 1969
AGTTTATAAA ACAGTCCTGT GTAAACTGCT CGAAGTTCTT CCGGAATTC

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FIG. 2

Human Acidic FGF

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                27                               54
TGC ATT TTG TGC CTT TGC TGG AAG AAC CGA CTA CAG GTT TGT TCA ATT TCT TAC

                81                               108
AGT CTT GAA AGC GCC ACA AGC AGC AGC TGC TGA GCC ATG GCT GAA GGG GAA ATC
                1                               162
                135
ACC ACC TTC ACA GCC CTG ACC GAG AAG TTT AAT CTG CCT CCA GGG AAT TAC AAG
Thr Thr Phe Thr Ala Leu Thr Glu Lys Phe Asn Leu Pro Pro Gly Asn Tyr Lys
                10                               20

                189                               216
AAG CCC AAA CTC CTC TAC TGT AGC AAC GGG GGC CAC TTC CTG AGG ATC CTT CCG
Lys Pro Lys Leu Leu Tyr Cys Ser Asn Gly Gly His Phe Leu Arg Ile Leu Pro
                30                               40

                243                               270
GAT GGC ACA GTG GAT GGG ACA AGG GAC AGG AGC GAC CAG CAC ATT CAG CTG CAG
Asp Gly Thr Val Asp Gly Thr Arg Asp Arg Ser Asp Gln His Ile Gln Leu Gln
                50                               60

                297                               324
CTC AGT GCG GAA AGC GTG GGG GAG GTG TAT ATA AAG AGT ACC GAG ACT GGC CAG
Leu Ser Ala Glu Ser Val Gly Glu Val Tyr Ile Lys Ser Thr Glu Thr Gly Gln
                70

                351                               378
TAC TTG GCC ATG GAC ACC GAC GGG CTT TTA TAC GGC TCA CAG ACA CCA AAT GAG
Tyr Leu Ala MET Asp Thr Asp Gly Leu Leu Tyr Gly Ser Gln Thr Pro Asn Glu
                80                               90

                405                               432
GAA TGT TTG TTC CTG GAA AGG CTG GAG GAG AAC CAT TAC AAC ACC TAT ATA TCC
Glu Cys Leu Phe Leu Glu Arg Leu Glu Glu Asn His Tyr Asn Thr Tyr Ile Ser
                100                               110

                459                               486
AAG AAG CAT GCA CAG AAG AAT TCG TTT GTT GGC CTC AAG AAG AAT CCC AGC TGC
Lys Lys His Ala Glu Lys Asn Trp Phe Val Gly Leu Lys Lys Asn Gly Ser Cys
                120                               130

                513                               540
AAA CGC GGT CCT CGG ACT CAC TAT GGC CAG AAA GCA ATC TTG TTT CTC CCC CTG
Lys Arg Gly Pro Arg Thr His Tyr Gly Gln Lys Ala Ile Leu Phe Leu Pro Leu
                140                               150

                567                               594
CCA GTC TCT TCT GAT TAA AGA GAT CTG TTC TGG GTG TTG ACC ACT CCA GAG AAG
Pro Val Ser Ser Asp
                155

                621
TTT CGA GGG GTC CTC ACC TGG TTG ACC CAA AAA TGT TCC CTT GA
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Comparison of amino acid sequence of
human basic and acidic FGF

(basic/acidic)

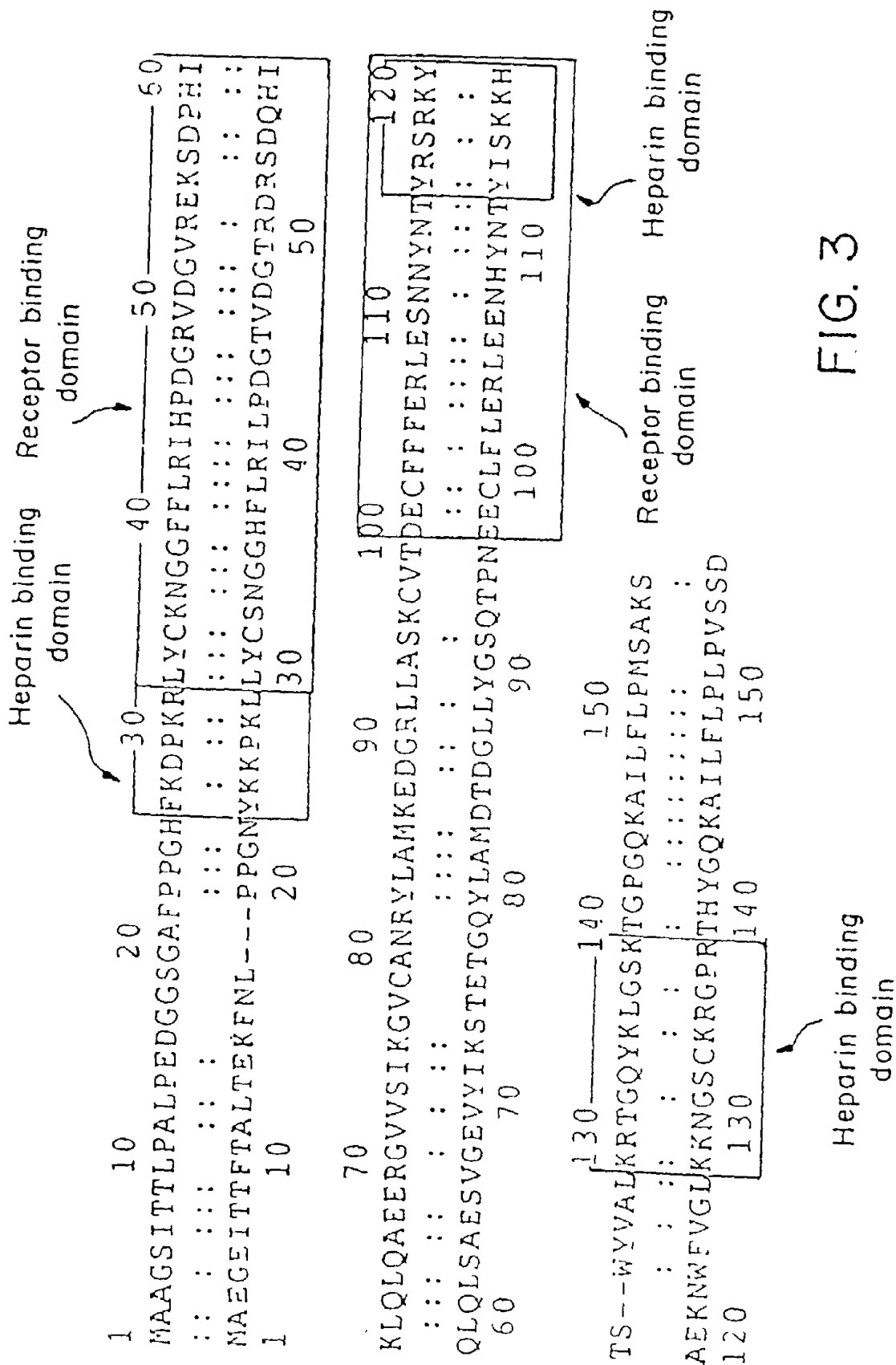


FIG. 3

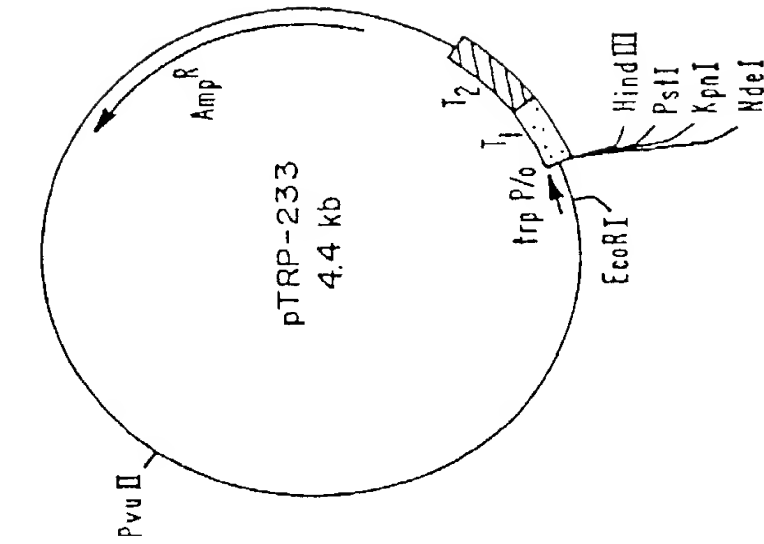
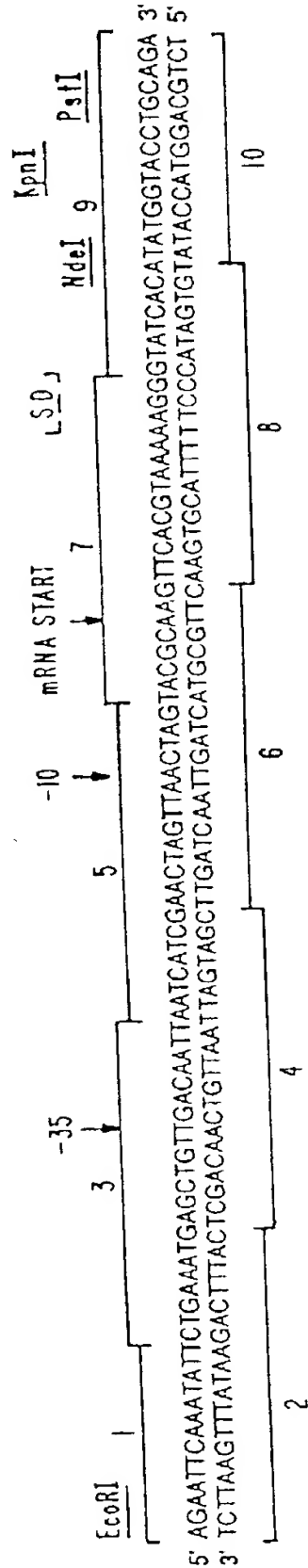


FIG. 4

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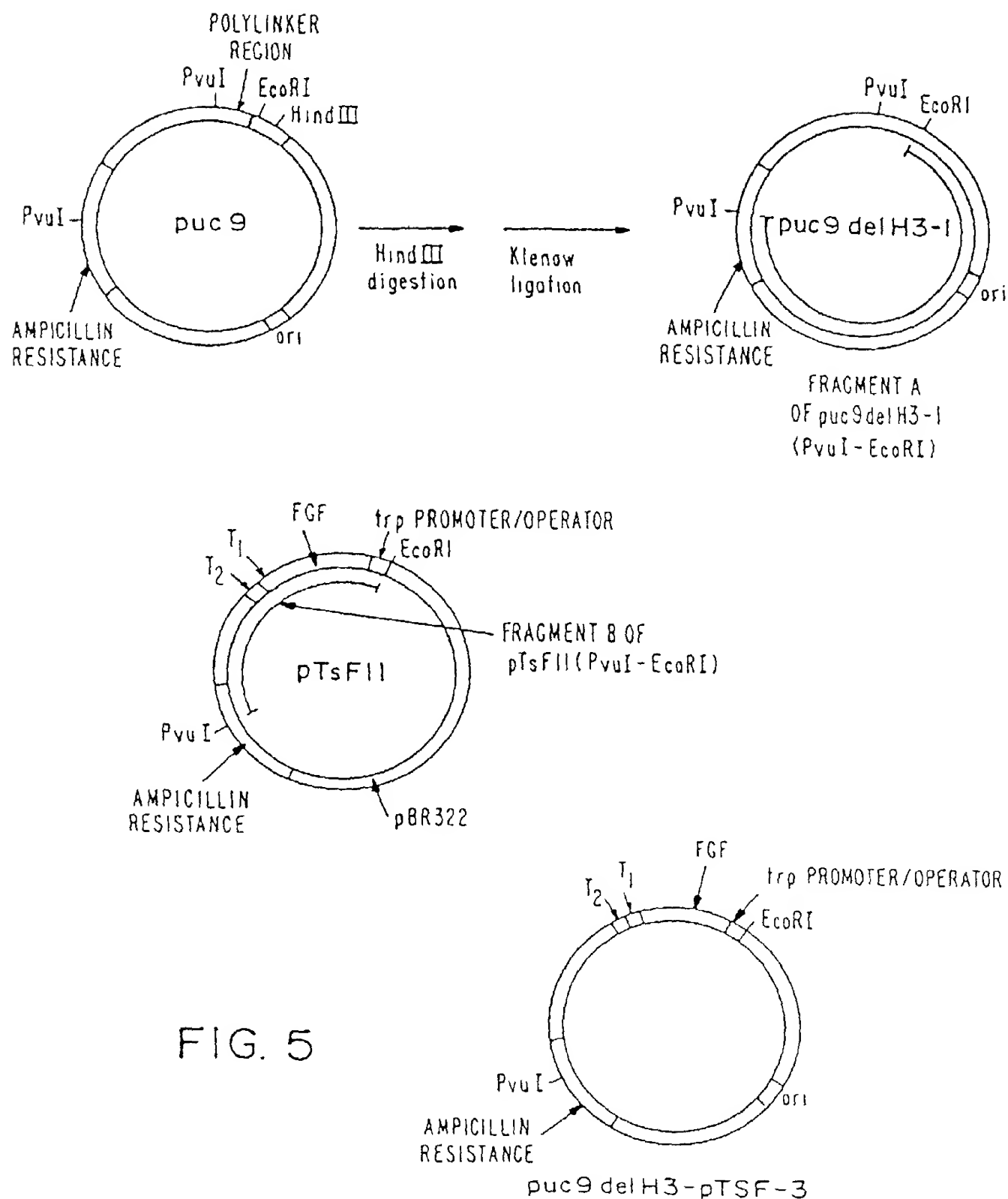


FIG. 5

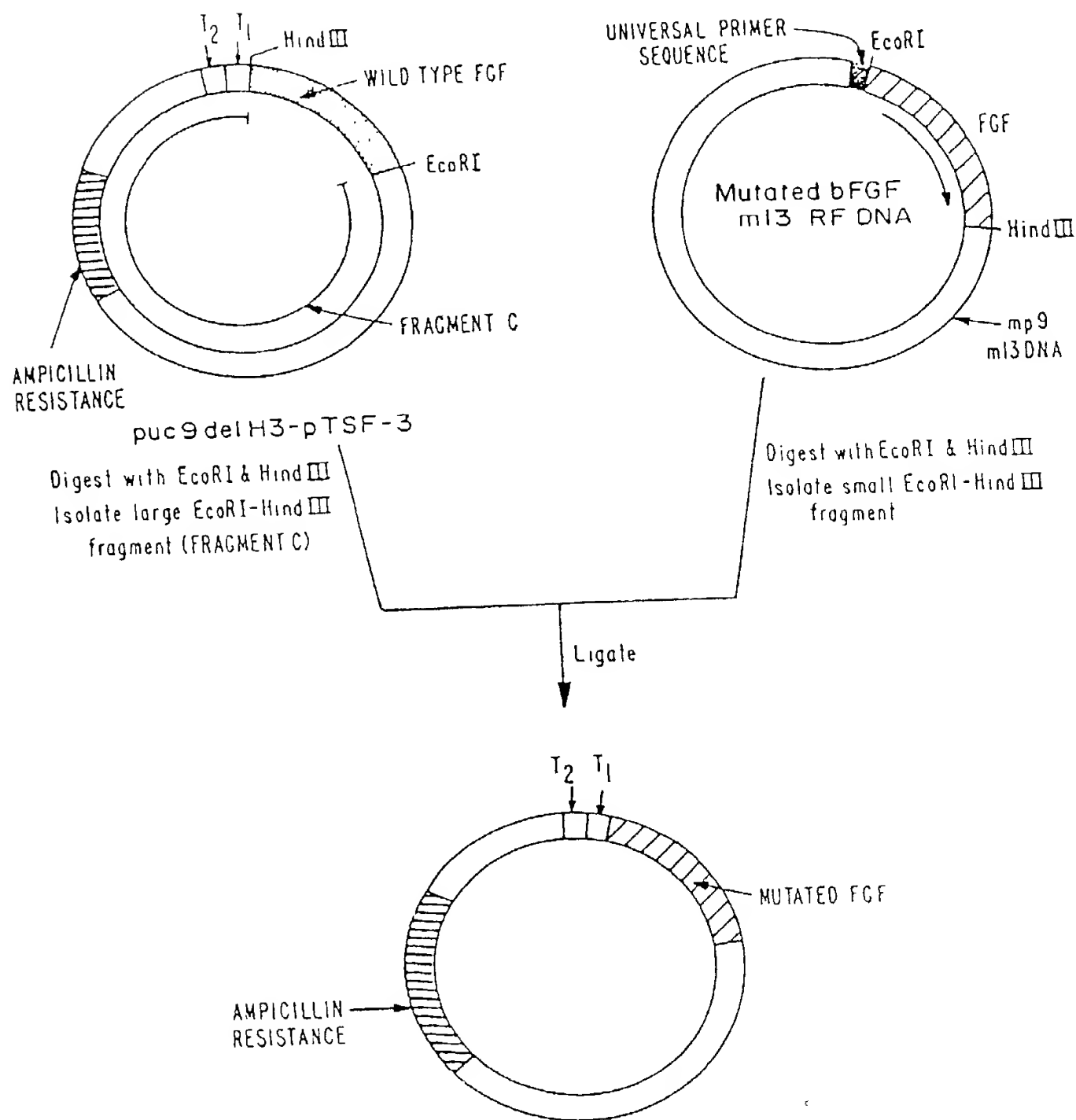


FIG. 6

FIG. 7

